UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934

Date of report (Date of earliest event reported): March 10, 2010 (March 10, 2010)

Arch Coal, Inc.

(Exact name of registrant as specified in its charter)

Delaware	1-13105	43-0921172
(State or other jurisdiction of incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)

CityPlace One
One CityPlace Drive, Suite 300
St. Louis, Missouri 63141
(Address, including zip code, of principal executive offices)

Registrant's telephone number, including area code: (314) 994-2700

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

o Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

o Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

o Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

o Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 7.01 Regulation FD Disclosure.

Beginning on March 10, 2010, and at other times thereafter, the attached slides will be presented to various investors by the Senior Management team of Arch Coal, Inc. The slides from the presentation are attached hereto as Exhibit 99.1 and are hereby incorporated by reference.

A copy of the slides will be available at http://investor.archcoal.com/events.cfm for 30 days.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

The following exhibit is attached hereto and furnished herewith.

Exhibit No.	Description
99.1	Arch Coal, Inc. Investor Presentation Slides

Signatures

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: March 10, 2010

Arch Coal, Inc.

By: /s/ Robert G. Jones
Robert G. Jones
Senior Vice President–Law, General Counsel and Secretary

Exhibit Index

Exhibit No.	Description
99.1	Arch Coal, Inc. Investor Presentation Slides

Exhibit 99.1

Arch Coal, Inc.

Arch Coal, Inc. Investor Presentation

March 2010

Forward-Looking Information

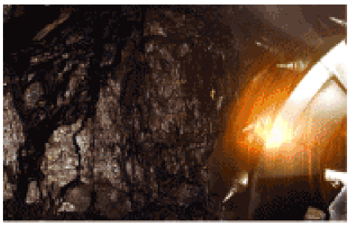
This presentation contains "forward-looking statements" – that is, statements related to future, not past, events. In this context, forward-looking statements often address our expected future business and financial performance, and often contain words such as "expects," "anticipates," "intends," "plans," "believes," "seeks," or "will." Forward-looking statements by their nature address matters that are, to different degrees, uncertain. For us, particular uncertainties arise from changes in the demand for our coal by the domestic electric generation industry; from legislation and regulations relating to the Clean Air Act and other environmental initiatives; from operational, geological, permit, labor and weather-related factors; from fluctuations in the amount of cash we generate from operations; from future integration of acquired businesses; and from numerous other matters of national, regional and global scale, including those of a political, economic, business, competitive or regulatory nature. These uncertainties may cause our actual future results to be materially different than those expressed in our forward-looking statements. We do not undertake to update our forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by law. For a description of some of the risks and uncertainties that may affect our future results, you should see the risk factors described from time to time in the reports we file with the Securities and Exchange Commission.

This presentation includes certain non-GAAP financial measures, including Adjusted EBITDA. These non-GAAP financial measures are not measures of financial performance in accordance with generally accepted accounting principles and may exclude items that are significant in understanding and assessing our financial results. Therefore, these measures should not be considered in isolation or as an alternative to net income from operations, cash flows from operations, earnings per fully-diluted share or other measures of profitability, liquidity or performance under generally accepted accounting principles. You should be aware that our presentation of these measures may not be comparable to similarly-titled measures used by other companies. A reconciliation of these financial measures to the most comparable measures presented in accordance with generally accepted accounting principles has been included at the end of this presentation.

Arch Coal is a leader in the coal industry

- **Second largest** coal producer in the U.S.
  - Leading position in the Powder River Basin
  - Largest producer in Western Bituminous region
  - Low-cost producer in Central Appalachia
  - Significant exposure to metallurgical markets
- Represent **16 percent** of the U.S. coal supply
  - Provide cleaner-burning, low-sulfur coal to domestic power producers to fuel 8 percent of the nation's electricity
  - Ship coal to domestic/international steel manufacturers and international power producers
- Lead coal industry in **mine safety** and **environmental compliance**
  - Talented workforce operates large, modern mines

Source: ACI

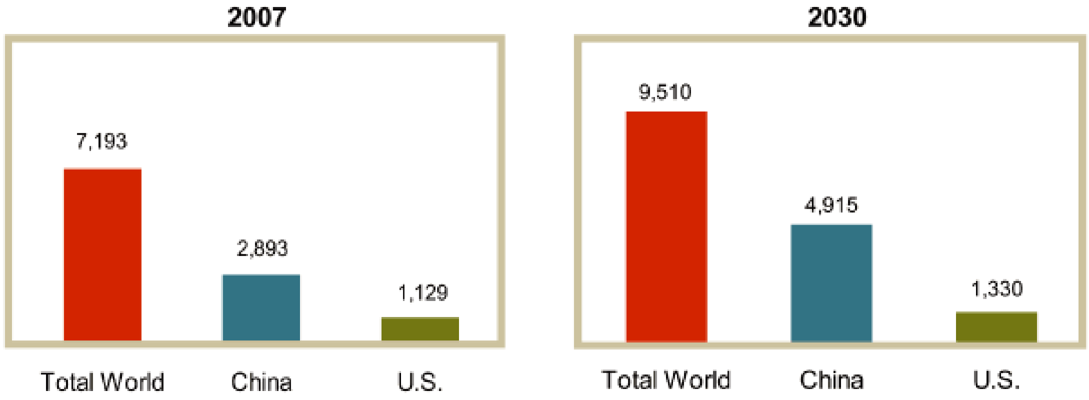




State of Coal Markets

Arch Coal, Inc.

World coal consumption is expanding rapidly

Coal Consumption
(in millions of short tons)



- Over **80%** of the world's population live in developing countries
- Many developing countries are just reaching the point where individual wealth and energy consumption start to **accelerate**

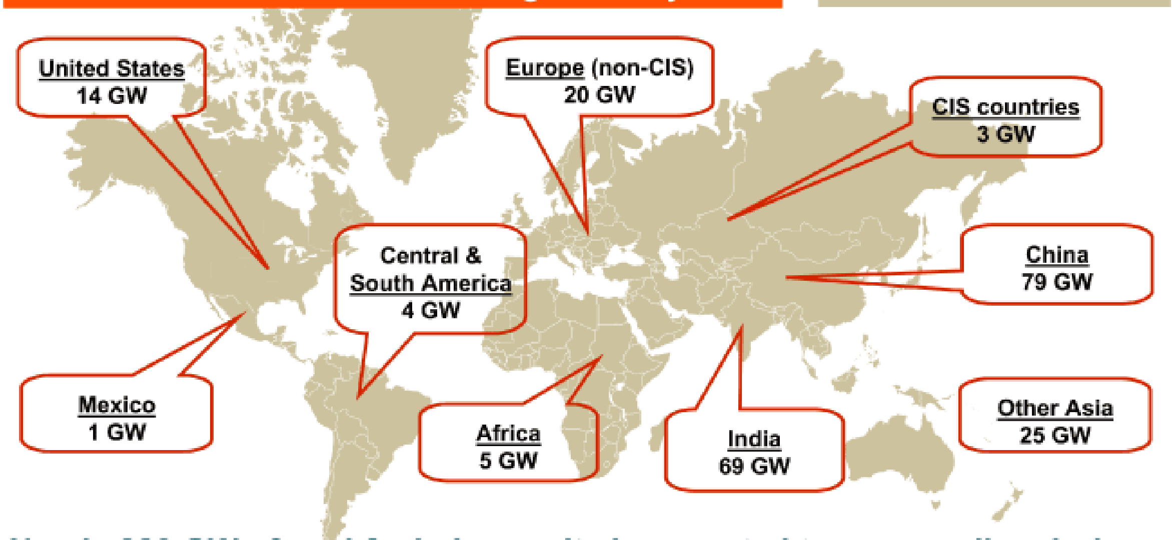
Arch Coal, Inc.

PROGRESSIVE RESPONSIBLE VITAL GROWING

Around the world, countries are building coal plants to fuel electricity needs

New Coal-Fueled Generation Coming Online by 2015:

2008 Global Coal Production: 7.5 billion short tons

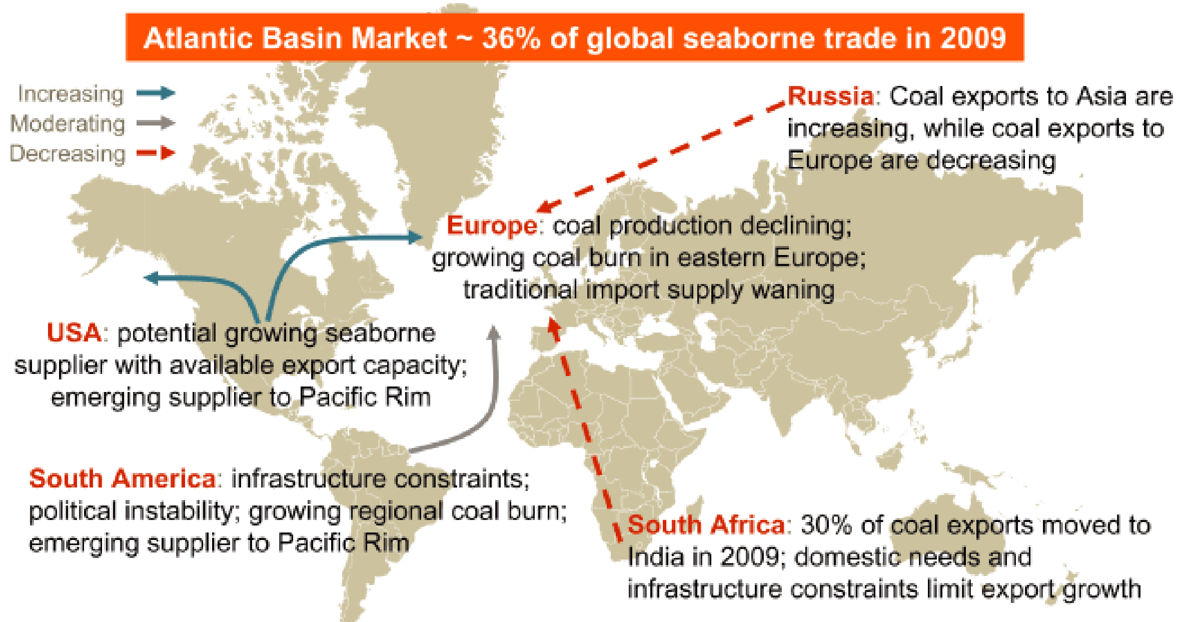


Nearly 220 GW of coal-fueled capacity is expected to come online during the next five years … and will be fueled by over 750 million tons of coal

Source: ACI and Platts International, estimates based on plants currently under construction

Global coal supply flows continue to shift – and create further opportunities for U.S. met/steam coal exports

Atlantic Basin Market ~ 36% of global seaborne trade in 2009



Who will supply coal in Atlantic Basin in this next market up-cycle?

Source: ACI

Global coal demand is recovering (albeit at different rates), while structural supply constraints remain

Last Market Run-Up

- "The lack of investment spent by **Australian infrastructure** providers over the past decade has resulted in severe rail and port bottlenecks." *Macquarie (6/07)*
- "**China which became a net importer** of coal this year, increased purchases of the fuel 27% in April to meet higher energy demand." *Bloomberg (5/07)*
- "**India is expecting to double its South African coal imports** during 2007. High demand and a halt in Chinese exports of coal are thought to be the cause of this increase." *Reuters (5/07)*
- "**Production is shifting away from West Virginia** because the state has presented coal producers with difficult regulations, torrents of litigation and orchestrated hostility that discouraged growth and investment." *The State Journal (5/07)*

Present

- "Fundamentally, the metallurgical coal market looks extremely tight, as recent **Australian infrastructure problems** have removed any remaining slack." *Macquarie (2/10)*
- "**China finished the year as a net importer** to the tune of 103.43mt – a massive swing from its position of net exporter of 17.43mt in 2008." *McCloskey (1/10)*
- "India was the biggest single buyer of South African coal in 2009…and is **hungry for more to feed its burgeoning power needs**." *Reuters (1/10)*
- "The outlook for **CAPP surface mining, in our view, remains in question** following the EPA's decision to undergo a thorough reevaluation of the standards mandated by the CWA. CAPP surface mines have begun to idle as existing permits are exhausted and cannot be extended." *Morgan Stanley (1/10)*

Source: ACI and news/industry reports

Coal was disproportionately impacted by downturn in 2009; should outperform other fuels in recovery

Incremental U.S. Coal Consumption and Supply

(in millions of tons)

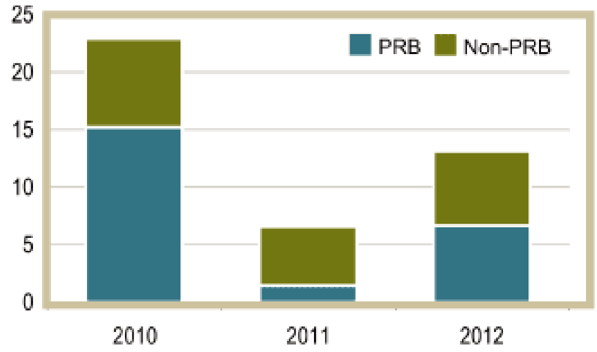
	2009	2010E
Economy	↓ 55 – 65	↑ 20 – 25
Weather	↓ 25 – 35	↑ 25 – 30+
Natural Gas	↓ 20 – 30	↑ 20 – 25
Hydro	↓ 3 – 5	↑ 1 – 2
Nuclear	↓ 1 – 3	↑ 0 – 2
Total Demand	↓ 120	↑ 75+
Supply	↓ 97	↓ 0 – 40
Surplus/Deficit	↑ 23	↓ 55

Source: EIA and ACI

U.S. coal consumption also will benefit from new coal plant start-ups

Anticipated Annual Supply Needs for U.S. Coal Plants Under Construction*

(in millions of tons)



- Approximately 5 GW – 16 plants – have come online in 2008 and 2009
- Build-out of an additional 13 GW through 2012 equates to **43 million tons** of new annual coal demand
- Arch estimates that the **Powder River Basin** will service one half of this demand
- Currently, we estimate that **6 GW** – roughly 13 plants – are scheduled to be in operation by the end of 2010

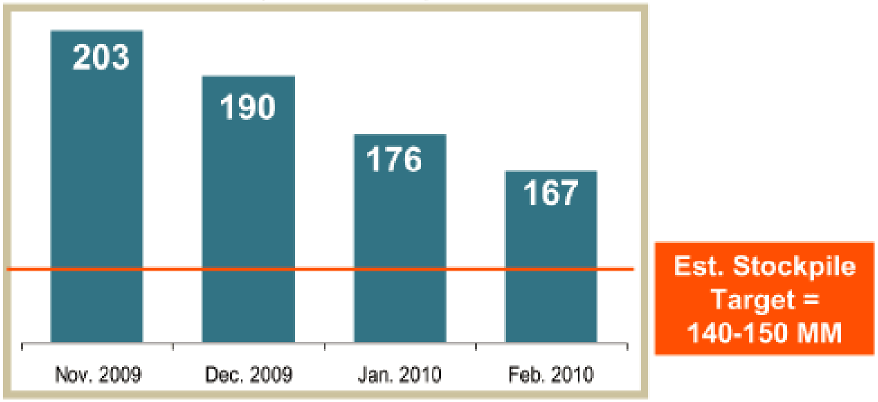
Source: Platts, EIA and ACI

** Gross of plant retirements*

U.S. coal stockpiles are being liquidated much faster than anticipated

Estimated Coal Stockpile Levels at U.S. Power Generators

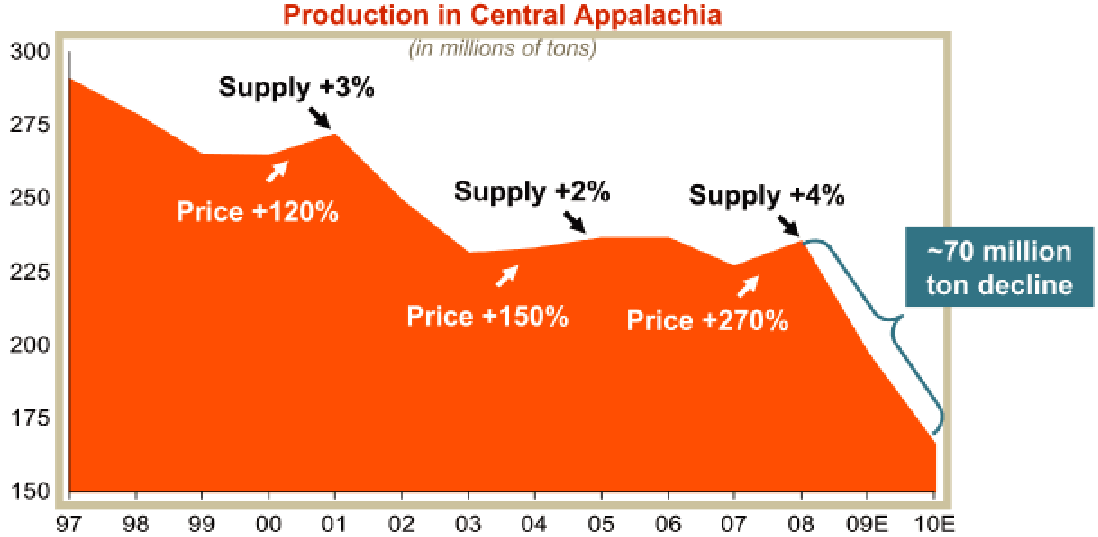
(in millions of tons)



- During the shoulder season, Arch anticipates a much **smaller build in stockpiles** versus previous years
- **PRB stockpiles are the lowest in the country** – translating into improvement in the forward curve index pricing (up more than 40% since Oct.'09) … and pressure building for additional price movement much earlier in this market up-cycle

Source: EIA and ACI

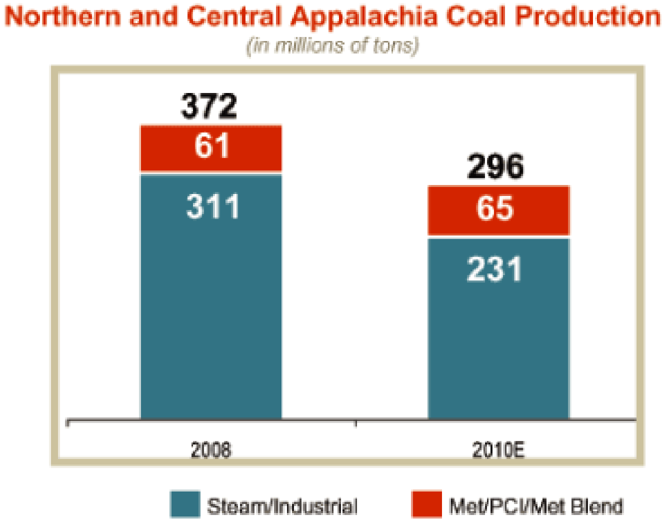
U.S. coal production continues to shift westward as Central Appalachia is in long-term secular decline



- **Sharp price run-ups** have acted to arrest production declines only temporarily
- Based on historical trend, most of that **supply reduction** is likely to be **permanent**
- The 2008 – 2010 drop is shaping up to be **largest fall-off in production** yet

Source: Coal Daily Price Indices (CAPP 12,000 BTU / 1% Sulfur / CSX) and Ventyx

Competition is set to increase for constrained coal supply in Northern and Central Appalachia



- Roughly **80 million tons of high-Btu Appalachian production** could disappear from steam coal markets or migrate to higher margin met coal markets

Source: EIA and ACI

Powder River Basin should fill most of the supply gap from the Appalachian Basins over the next five years

Powder River Basin

- **Lowest cost** and **largest** coal supply region in the United States
- Consistent with history, **PRB will be called upon to fill supply gap** created by Appalachia
- Replacing 80 million tons of Appalachian coal would require 120 million tons of PRB coal on a Btu-equivalent basis
- Would represent the most profound call on PRB yet

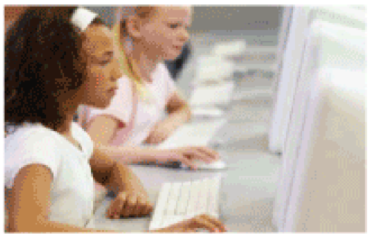
Illinois Basin

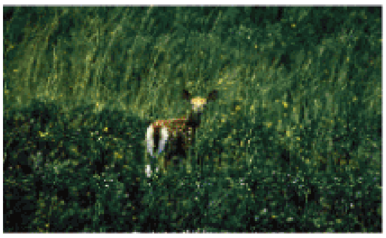
- **Positive long-term outlook … but with challenges**:
  - Much higher cost than PRB
  - Capital investment required will be significant
  - Long lead time for permitting and project development
  - Some areas contain difficult geology
  - Quality disadvantage (particularly chlorine) in certain regions

Northern App

- Limited growth potential
- High-sulfur content
- **Export pull** for steam and crossover met products will further reduce supply available to domestic power generators

Source: ACI

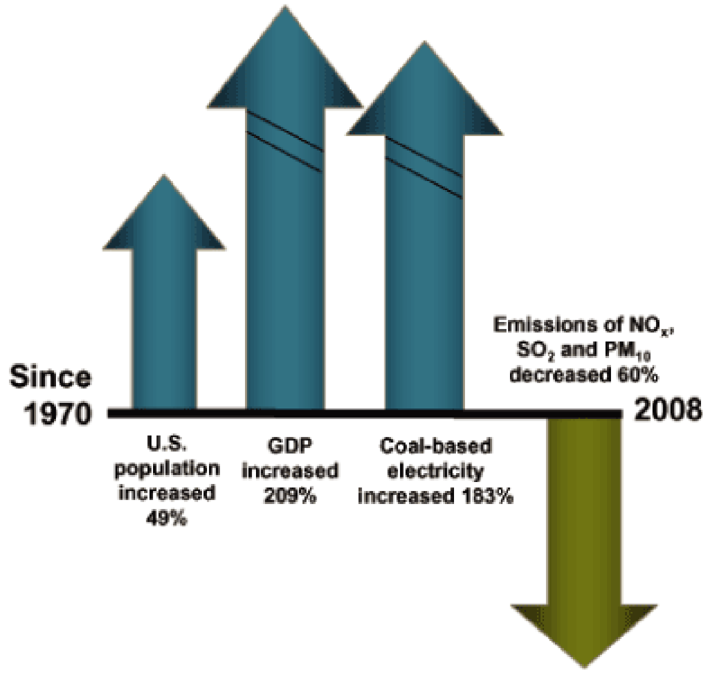




Energy, the environment and clean coal technologies

Arch Coal, Inc.

Coal is increasingly clean…and will become more climate-friendly with time and funding

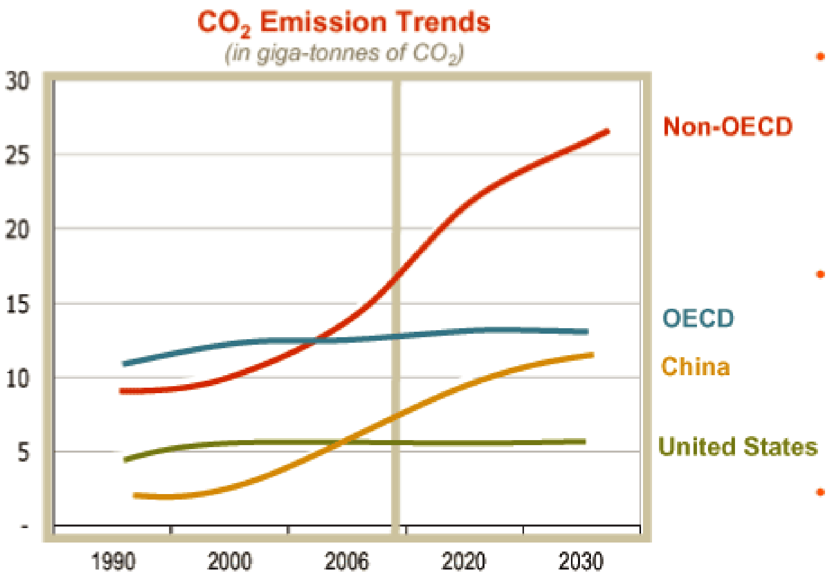


Sources: NMA, EPA

NO_x (Nitrogen Oxide), SO_2 (Sulfur Dioxide), PM_{10} (Particulate Matter)

PROGRESSIVE RESPONSIBLE VITAL GROWING

The developed and developing world must work together to address the climate challenge



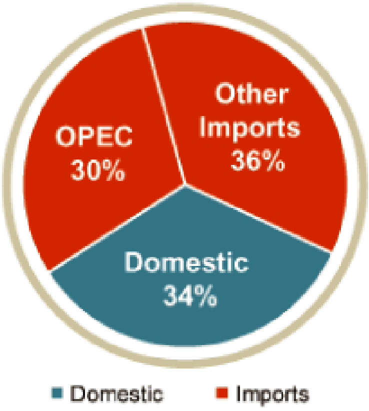
- Rapid increases in **CO_2 emissions** in emerging Asia further underscore the need for clean coal technologies
- **China** is now the largest emitter of CO_2 and the developing world has surpassed the OECD nations in total emissions
- Clearly, we will need **global solutions** to address the climate issue

Source: International Energy Outlook 2008 *OECD = Organization for Economic Cooperation and Development

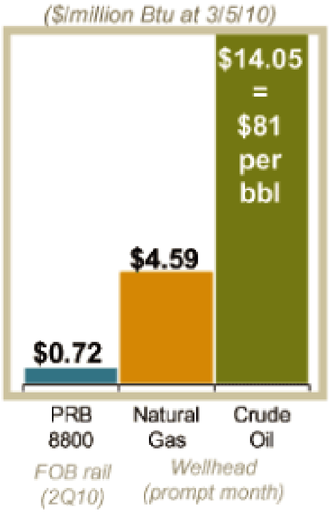
Coal will remain a vital part of America's energy future

U.S. Energy Reserves
(in trillion Btu)

U.S. Petroleum Supply
(million barrels per day, 2008)

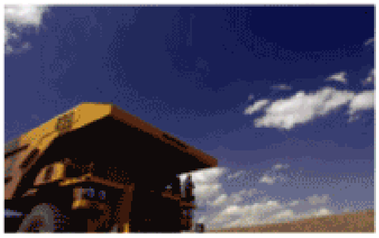


U.S. Fuel Prices
($/million Btu at 3/5/10)



Source: EIA, BP Statistical Review of World Energy 2008, Argus Coal Daily

PROGRESSIVE RESPONSIBLE VITAL GROWING

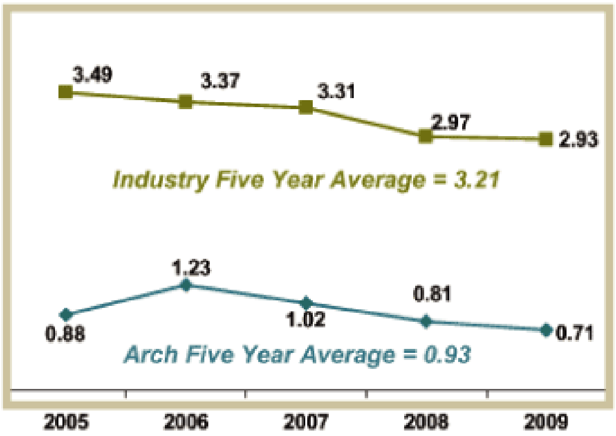


Arch Coal Overview

Arch Coal, Inc.

Arch's safety and environmental performance is the best among the largest public coal companies

Lost-Time Safety Incident Rate
(per 200,000 employee-hours worked)

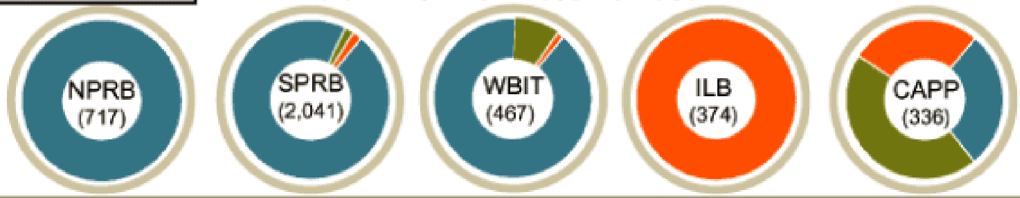


- Arch's **safety record** is the best in the U.S. coal industry
  - Set new company record in 2009
  - Arch's rate was one-fourth the national coal industry average
- Arch's **environmental performance** ranks first among major coal industry peer group
  - Set new company record in 2009
- Ten of Arch's individual mines and facilities achieved either zero reportable injuries or zero environmental violations in 2009

Sources: ACI, MSHA

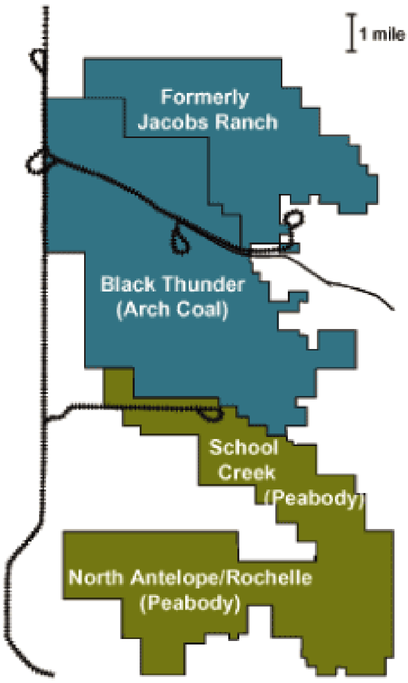
Arch's national scope of operations and reserve base includes presence in five major U.S. coal basins

3.9-Billion Ton Reserve Base*



Arch completed acquisition of Jacobs Ranch in 2009, and integrated it into Black Thunder

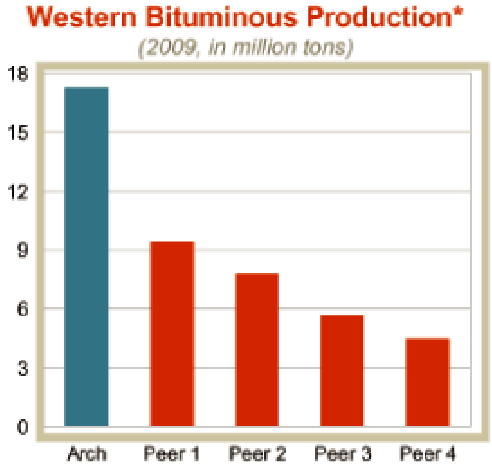
- The enhanced Black Thunder is the **largest single coal-mining complex in the world**
  - Permitted coal reserves* of 1.5 billion tons
  - Productive capacity of more than **140 million tons** per year should market conditions warrant
- Synergies from the transaction of between **$45 million and $55 million** annually
  - Roughly half represent operational cost savings with the remaining related to administrative cost savings as well as enhanced coal-blending opportunities
- Arch's **leading position in the PRB** is focused on the 1-billion-ton domestic steam coal market
  - Growing interest in expanding exports off the West Coast



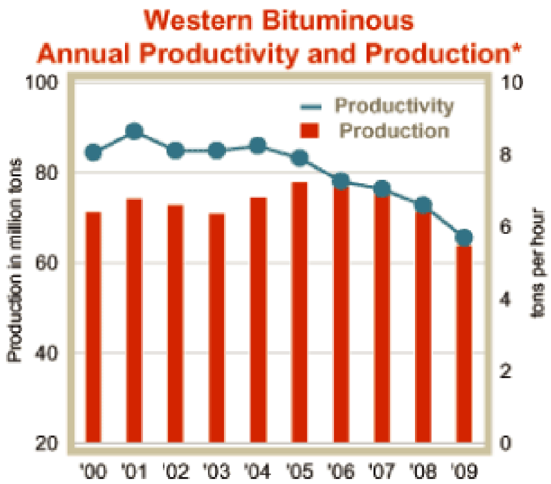
Source: ACI

*Reserves at 12/31/09

Arch's Western Bituminous assets continue to contribute meaningfully to the company's earnings profile



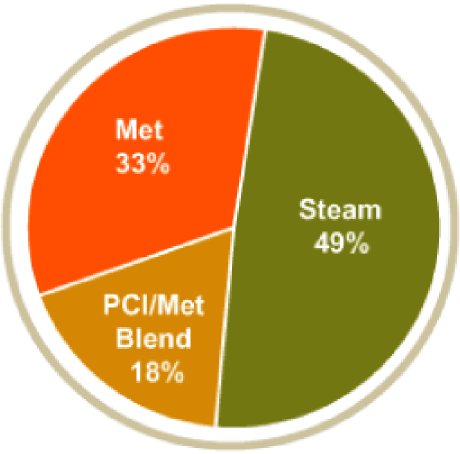
- Arch is the leading producer in the Western Bituminous region
  - Earnings leverage as demand expands for region's high-Btu coal and as legacy contracts roll off



- Supply in the mature Western Bituminous region is constrained even as pricing has remained elevated

Arch is also a leading producer of met and PCI coal – with the potential to boost sales in a robust market

Central Appalachian Production Profile
(based on 15 million tons of productive capacity)



- Arch's low-cost production profile is geared towards serving **high margin met market** as well as high quality **Eastern power** and growing **seaborne steam** market
- Arch's capabilities equate to roughly 10 percent of U.S. met coal supply
- In the current met market, Arch's **met shipments should increase meaningfully**

Source: ACI, EIA and company SEC filings

Arch is strongly positioned for the recovering domestic coal market

- Arch employs a pragmatic, **market-driven pricing strategy**
- We remain committed to maintaining near-term stability in earnings
  - A majority of our remaining volumes for 2010 are committed
- We also strive to preserve our long-term earnings leverage by retaining the flexibility to layer in future volumes at attractive levels

Arch Unpriced Tonnage

(as of 12/31/09, in millions of tons)

Arch has the capacity to capitalize on strengthening coal market

Arch Potential Upside to Increase in Coal Prices – 2011

($ in millions, except per ton and per share amounts)

	Illustrative Price Increase	
Steam Coal	$2	$5
Met Coal	$20	$40
2011 Unpriced Tons (in millions)		
Steam Coal (1)	88.0	88.0
Met Coal (1)	7.0	7.0
Potential Incremental Revenue	$316	$720
Less: Sales-Sensitive Payments @ 18.5% (2)	(58)	(133)
Potential Incremental EBITDA	**$258**	**$587**
Less: Taxes @ 25%	(65)	(147)
Potential Incremental Net Income	$193	$440
Potential Incremental EPS (3)	**$1.18**	**$2.70**

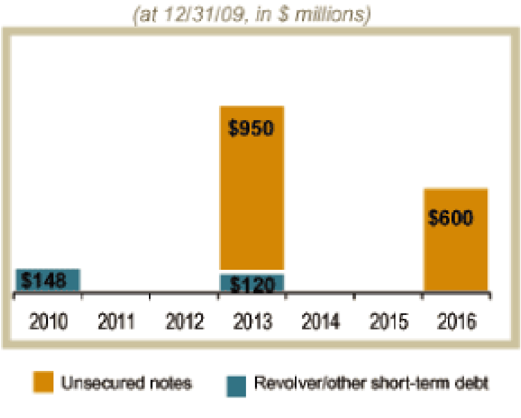
(1) Steam coal based on midpoint of open tonnage guidance of 95 million tons less met coal capabilities of roughly 7 million tons
(2) Sales-sensitive costs consist of royalties, black lung tax and severance tax
(3) Based on diluted weighted average shares outstanding of 163 million in 2009

Source: ACI

Arch maintains one of the strongest and cleanest balance sheets in the U.S. coal industry

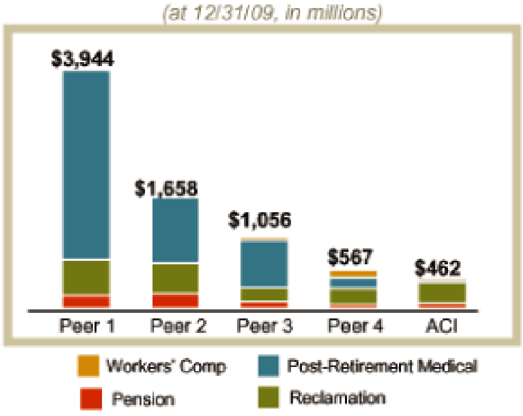
Debt Maturity Profile

(at 12/31/09, in $ millions)



Legacy Liabilities of Largest U.S. Coal Companies

(at 12/31/09, in millions)



- Financing initiatives in 2009 enhanced **liquidity** and extended **debt** maturities
- Available liquidity is more than $700 million

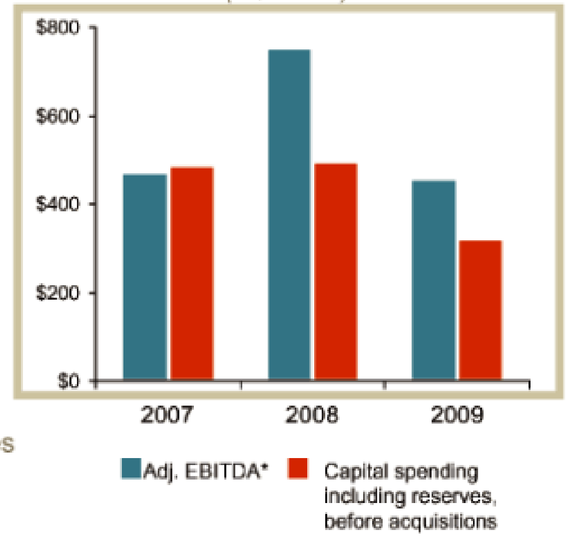
- Low level of legacy liabilities vs. peers
- Two-thirds of Arch's legacy liabilities are comprised of reclamation liabilities

Source: ACI and peer SEC filings

With major expansion plans completed, Arch is focused on generating free cash flow

- From 2004-2007, Arch completed a large capital spending program that supported organic growth initiatives
- Looking ahead, Arch will **maintain rigorous capital and cost control** – with a focus on growing free cash flow in 2010 and beyond
- Arch will evaluate all priorities for utilizing **free cash flow**, including:
  - Debt pay down
  - Dividends
  - Share repurchase
  - Re-investing in the business through organic growth and acquisition opportunities
  - Consider investments to expand market for coal (coal conversion technologies)

Arch Coal, Inc.
(in $ millions)



EBITDA Reconciliation Chart

Included in the accompanying presentation, we have presented certain non-GAAP measures as defined by Regulation G. The following reconciles these items to net income as reported under GAAP.

Adjusted EBITDA

Adjusted EBITDA is defined as net income attributable to the Company before the effect of net interest expense, income taxes, depreciation, depletion and amortization and the amortization of acquired sales contracts, net, and other non-operating expense. Adjusted EBITDA may also be adjusted for items that may not reflect the trend of future results.

Adjusted EBITDA is not a measure of financial performance in accordance with generally accepted accounting principles, and items excluded to calculate Adjusted EBITDA are significant in understanding and assessing our financial condition. Therefore, Adjusted EBITDA should not be considered in isolation nor as an alternative to net income, income from operations, cash flows from operations or as a measure of our profitability, liquidity or performance under generally accepted accounting principles. We believe that Adjusted EBITDA presents a useful measure of our ability to service and incur debt based on ongoing operations. Furthermore, analogous measures are used by industry analysts to evaluate operating performance. In addition, acquisition-related expenses are excluded to make results more comparable between periods. Investors should be aware that our presentation of Adjusted EBITDA may not be comparable to similarly titled measures used by other companies. The table below shows how we calculate Adjusted EBITDA.

	Year Ended December 31,		
	2009	2008 (Unaudited)	2007
Net income	$ 42,179	$ 355,211	$ 175,943
Income tax expense (benefit)	(16,775)	41,774	(19,850)
Interest expense, net	98,310	64,285	72,265
Depreciation, depletion and amortization	301,608	293,553	243,695
Amortization of acquired sales contracts, net	19,623	(705)	(1,633)
Costs related to acquisition of Jacobs Ranch	13,726	-	-
Other non-operating expense			2,273
Net income attributable to noncontrolling interest	(10)	(881)	(1,014)
Adjusted EBITDA	$ 458,661	$ 753,237	$ 471,679

Source: ACI